PATHOLOGY AND BACTERIOLOGY.

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On the Pathological Anatomy of Chorea Minor.—M. RICHARD (*Deutsch. Arch. f. klin. Med.*, 1902, Band lxxii., Heft 5 and 6, p. 504) reports two cases of chorea minor, with detailed histological descriptions. The first case followed an attack of acute articular rheumatism, while the second case was characterized by previous attacks of chorea. At autopsy an acute endocarditis was found in both cases, due probably in the first case to the staphylococcus pyogenes aureus, and in the second to the streptococcus pyogenes. A bacteriological examination was made of the fluid from the ventricles of the brain in both cases, with practically negative results. The nervous system in neither case presented any gross pathological changes, but microscopically there was a degeneration of both anterior and posterior root fibres in the cord, and even more marked alterations in the brain. No lesions were found in the spinal ganglia. Throughout the brain there was a small-cell infiltration, most marked in the perivascular spaces; this invasion in places extended over moderately large areas. Small hemorrhages were also found, appearing most numerous in the region of the basal ganglia and beneath the ependymal cells of the ventricles. Within the last few years Pianese has described an "ependymyelitis" occurring in a case of chorea minor, and Neuwerck has called attention to areas of inflammation and hemorrhage in a similar case. The author believes the changes which he reports should be considered as dependent upon a general toxæmia.—W. T. L.

Bacteria in the Bile Passages of Dogs.—GILBERT and LIPMAN (*Presse Médicale*, June 18, 1902), at a meeting of the Société de Biologie, report their results of a series of bacteriological examinations of the bile passages in dogs. Cultures were taken from the gall-bladder and various parts of the bile ducts, and, while uniformly sterile for aërobes, showed constantly the presence of various anaërobic bacteria. In view of the fact that the bile passages have been supposed to be sterile, and on account of the significance of bacteria in many diseases of the bile passages, the authors regard their results as of more than passing interest.—F. P. G.

On the Transplantation of a Sarcoma of the Thyroid Gland of a White Rat.—LEO LOEB (*Virchow's Archiv*, 1902, Band clxii., Heft 2, p. 175) reports on the experimental transplantation of portions of a sarcoma of the thyroid gland of a white rat into the abdominal cavity of other white rats. The original tumor was quite vascular, and was further characterized by areas of softening in which secondary hemorrhages were often found. In the first transplantation the tumor nodule became partially necrotic, and was surrounded by a zone of connective tissue. Cells arising probably from the transplanted tumor were found in the connective-tissue zone, where they showed pyknosis and mitosis. When the growth was again transplanted into other rats it gave rise to tumors closely resembling in their structure the original sarcoma. During their development a myxoid degeneration was noted, together with the formation of cysts. By inoculating fluid from these cysts into the abdominal cavity of rats the author succeeded in producing in some cases single sarcomatous nodules, and in others a general sarcomatosis of the peritoneum. Thus successive transplantations were made intraperitoneally and subcutaneously over a period of fifteen months. In all 150 animals were used.

During the development of these tumors it was found that if they became infected their growth was much more extensive than if bacteria were excluded. For instance, a nodule embedded in the deeper subcutaneous tissues of the rat was soon surrounded by connective tissue and ceased to grow, while another nodule which involved the skin and became infected increased rapidly in size and produced extensive contact metastases. Again, it was found that if an incision was made, and small pieces removed from an encapsulated tumor which had stopped growing, rapid growth again took place, with the formation of small metastatic nodules in the surrounding tissues. No metastases ever developed by means of the bloodvessels or lymph channels. Throughout the experiments the sarcoma retained in general its original morphological and physiological characteristics, but certain modifications were observed from time to time. Occasionally the tumor cells assumed the characters of cells from endothelial origin, although the original growth was a spindle-celled sarcoma. By further transplantation, however, the spindle-cell type was again restored. Giant cells were also occasionally found.—W. T. L.

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